

PUK, P.S.; KARTSEVA, G.N.

Prospecting outlook for petroleum in the lower Yenisey River
area. Inform.biul.NIIGA no.16:22-29 '59. (MIRA 15:3)
(Yenisey Valley--Petroleum geology)

GRUBIN, I.S.; KALINIKO, M.M.; YUK, P.S.; BOROMOV, D.S.

Further trends in oil prospecting in the basic promising
regions of northern Siberia. Study NIIIA 12: 95-101 '61.
(NIIA 14-10)

(Russia, Northern Siberian geology)

PUKA, Taras Fridrikhovich; BAZHANOVA, S., red.; LEMBERGA, A.,
tekhn. red.

[Decorative forms of woody plants for landscape garden-
ing] Drevesnye dekorativnye formy dlia zelenykh nasazh-
denii. Riga, Izd-vo AN Latviiskoi SSR, 1963. 93 p.
(MIRA 17:2)

FUKA, Taras Fridrikhovich; BERZINA, L., red.; PILADZE, Z., tekhn. red.

[Propagation of coniferous ornamental trees] Dekorativo skuju koku
pavairošana. Rīga, Latvijas PSR Zinatnu akadēmijas izdevniecība,
1960. 77 p. [In Latvian] (MIRA 14:12)
(Plants, Ornamental) (Coniferae)

MAURIN', A.M. [Maurins, A.M.]; PUKA, T.F.; RIEKSTIN', I.R. [Riekstins, I.R.].

Ornamental trees and shrubs in the collections of the botanical
garden in Salaspils. Biul. Glav. bot. sada no.29:14-25 '57.

(MIRA 11:1)

1. Botanicheskiy sad AN Latvyskoy SSR.
(Salaspils--Plants, Ornamental) (Trees) (Shrubs)

PUKALOV, I.P., inzhener (g. Smolensk).

~~Lightweight self-wedging anticreepers. Put' i put. khoz. no.7:21~~
Л1 '57. (MLBA 10:8)

(Railroads--Rails)

ZUSMANOVSKAYA, L.L.; PUKALOV, V.I.

Investigating the characteristics of the EPK class thermosetting
lacquer with "F" heat resistance. Sbor. nauch. trud. EINI
2:229-236 '62. (MIRA 16:8)

(Electric insulators and insulation)
(Lacquer and lacquering)

FUKALOV, V.I., inzh. (g.Novochoerkassk)

Glass tape for armature binding. Elek.i tepl. tiaga 5 no.12:30-32
D '61. (MIRA 15:1)

(Armatures)

(Electric ~~insulators and~~ insulation)

ALIKIN, R.I.; GORDIYENKO, P.I.; BESPROFVANNYY, I.G.; ZHIBTSOV, P.P.;
ZOLOTAREV, P.A.; ZUSMANOVSKAYA, L.L.; IBRAGIMOV, K.G.; KOZOREZOV,
M.A.; KOKOREV, A.I.; KUPRIANOV, Yu.V.; KURECHKA, A.L., kand.
tekhn. nauk; LITVINOVA, L.M.; LOZANOVSKIY, A.L., kand. tekhn.
nauk; MAVDRIKOV, F.I.; MAKHAN'KOV, L.V.; PUKALOV, V.I.; RAYLYAN,
A.F.; SVERELOV, V.Ya.; SKLYAROV, B.S.; SOLOV'YEV, K.M., kand.
tekhn. nauk; STUKALKIN, A.N.; SUROVIKOV, A.A.; TIKHONOV, N.G.;
SHTEFENKO, P.K.; YANOV, V.P.

[V1FO electric locomotive.] Electrovoz VA80. Novocherkassk. Nauchno-
issledovatel'skii institut elektrovozostroenia. Sbornik nauchnykh
trudov, vol. 5) (MIRA 18:5)

YEFIMOV, V.A., doktor tekhn. nauk; KUZEMA, I.D., kand. tekhn. nauk;
ZHIGULA, A.V., inzh.; SAPKO, V.N., inzh.; KISSEL', N.N.,
inzh.; CHERNYSHEV, I.S., inzh.; ZARUBIN, N.G., inzh.;
STRYAPIN, I.Ya., inzh.; OLESHKEVICH, T.I., inzh.; SONIN, G.V.,
inzh.; PUKALOV, V.P., inzh.

Rapid top pouring of rimmed steel from ladles with a
capacity from 350 to 480 tons. Stal' 24 no.1:30-32 Ja '64.
(MIRA 17:2)

BUKAN, Stefan

Vyroba kvalitnych kompostov. (Production of Quality Composts. illus., tables) Bratislava, Pover. polnohosp. a lesneho hosp., 1957. 32 p. Vol. 22 of the series Polnohospodarske aktuality (Current agricultural problems.).

The purpose of this pamphlet is to explain to our farmers how it is possible to stretch organic fertilizers with the help of peatmoss, and thus to remedy the shortage of manure in trying to increase the crop yield.

Bibliograficky katalog, CSR, Slovenske knihy, Vol. VIII. 1957. No. 10. p.315.

PUKANSZKY, E.

"New types of Hungarian cement." p. 165. (Építőanyag, Vol. 5, no. 5, May 53, Budapest)

SO: Monthly List of East European Accessions, Vol 3 No 2 Library of Congress Feb 54 Uncl

PUKANSZKY, L.

Pukánszky, L. Some examples of factors. Publ. Math. Debrecen 1 (1956), 135-156.

This paper is concerned with factors of type III and the objective is to extend certain results known for type II to these. It is shown that there exists non-isomorphic factors of type III. A second major result is that there exists maximal semi-regular abelian rings in the sense of Dixmier in some factors of type III.

A factor M is said to have the property L if there exists a sequence of unitary operations $U_n, U_n \in M$, such that $\text{weak } \lim U_n = 0$ and $\text{strong } \lim U_n^* A U_n = A$ for every $A \in M$. Two factors of type III are constructed, one of which has this property L , the other does not. Thus these factors are not isomorphic.

Let N be a subring of M and T denote the ring determined by those unitary operators of M for which $U^* N U \subset N$. Dixmier calls N "semiregular" if T is a proper subset of M . In the present paper it is shown that there exists factors of type III which have maximal abelian subrings which are semiregular.

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DUKANSKY, L.

The construction of the examples is based on the von Neumann procedure [Ann. of Math. (2) 41 (1940), 94-161; MR 1, 146]. A measure space X is given and a countable group \mathcal{G} of transformations of X into itself. Under certain circumstances a system of group numbers of \mathcal{G} with coefficients which are measurable functions on X can be set up both to represent the Hilbert space \mathcal{H} and the ring \mathcal{M} .

F. J. Murray (New York, N.Y.)

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FJM

PUKANSZKY, L.

2000

On the theory of quasi-unitary algebras. 1 - P/W

Acta Sci. Math. Szeged 16 (1955), 103-121.
 A quasi-unitary algebra R [J. Dixmier, Comment. Math. Helv. 26 (1952), 275-322; MR 14, 660] is an algebra over the complex numbers, on which an involutive antiautomorphism $x \rightarrow x^*$, an isomorphism $x \rightarrow x^{\#}$, and an inner product (x, y) are defined, such that R becomes a pre-Hilbert space, satisfying the axioms (1) $(x^*, x^*) = (x, x)$, (2) $(x, x^*) \geq 0$, (3) $(xy, z) = (y, x^*z)$, (4) $x \rightarrow yx$ for fixed y is continuous, and (5) the linear set

generated by elements of the form $xy + (x, z)^*$ is dense in R for x, y, z arbitrary in R . The algebra is unitary if x^* always equals x .

Let U, V, S, J be the maximal closed extensions of the mappings $y \rightarrow xy, y \rightarrow yx, s, j$ to the completion H of R . The weak closure of the operators U, V is a ring of operators R^o (resp. $R^{\#}$). An element $a \in H$ is called left bounded, if there exists an operator V_a such that $V_a x = V_a a$ for every $x \in R$. If $J = [M' M^{-1}]$, where M commutes with $R^o, M \geq 0$, and $M' = SMS$, then R^o is semi-finite (has no type III direct summand) and one obtains a canonical trace $\phi(A) = \sum_i (Ma_i, Mb_i)$ for elements A of R of the form $A = \sum V_a V_a^*$ (with a_i left bounded and in the domain of M).

PUKANSZKY, L.

The author extends the work of Dixmier, obtaining the following typical results: If R^* is semi-finite, then J has the form $[M^* M^{-1}]$, where M satisfies the conditions above. If M_0^* is a positive definite operator commuting with a semi-finite ring of operators N , and if ϕ is a trace defined on a two-sided ideal of N , then there exists a quasi-unitary algebra R with R^* isomorphic to N in such a way as to have $M_0^* \phi$ correspond to the M^* and canonical trace of R^* . If R_1, R_2 are "maximal" (cannot be extended in such a way as to preserve \int, s , etc.) with semi-finite R_1^*, R_2^* , and if there is a $*$ -isomorphism between R_1^*, R_2^* with corresponding operators M_1^*, M_2^* and maximal extensions of canonical traces ϕ_1, ϕ_2 , then R_1 and R_2 are isomorphic. (These results extend work of Godement [Ann. of Math. (2) 59 (1954), 47-62; MR 15, 441] and Segal [ibid. 57 (1953), 401-457; MR 14, 991]. The author concludes by giving an example of a quasi-unitary algebra with semi-finite R^* for which the canonical trace is not maximal for any choice of M , and a condition for R^* to be finite. E. L. Griffin, Jr. (Ann Arbor, Mich.).

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Handwritten signature or initials.

PUKANSZKY, L.

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Pukánszky, L. On a theorem of Mautner. Acta Sci. Math. Szeged 15, 145-148 (1954).

The author discusses and modifies a result of the reviewer [Ann. of Math. (2) 51, 1-25; 52, 528-555 (1950); these Rev. 11, 324; 12, 157] on direct integrals of Hilbert spaces and the corresponding decompositions of rings of operators and unitary representations.

F. I. Mautner.

10-28-54 LL

NUKALYI, I.

The Madon-Nikolyin theory of operator rings; an excerpt of an article.
E. 211, (1957. EMBEL, Budapest, Hungary), Vol. 4, No. 2, 1954.

17: Monthly List of East European Accessions, (ESAI), LC, Vol. 4,
No. 5, May 1955, Incl.

10140, L., Insh. (p. Kanan)

Stereophonic amplifier. Radio no. 9:53 S '65.

(MIA 19:1)

PUKAS, Tadeusz, dr inz.

Symposium on "The Theory and Structure of Complex Compounds."
Chemik 15 no.7/8:283 J1-Ag '62.

PUKAS, Tadeusz, dr inz.

5th National Polish Scientific Congress of Student Chemical
Associations. Chemik 16 no.1:35-36 Ja '63.

PUKAS TADEUSZ

POLAND/Analytical Chemistry - Analysis of Inorganic Substances.

E-2

Abs Jour : Ref Zhur - Khimiya, No 8, 1958, 24822
Author : Pukas Tadeusz, Grabinska Kazimiera
Inst : Silesian Polytechnic
Title : Use of the Hydroxyquinoline Method for Determination of Silica.
Orig Pub : Zesz. nauk. Politechn. slaskiey, 1957, No 12, 93-96
Abstract : Description of a method based on precipitation of the water-insoluble compound of silicomolybdic acid with hydroxy-quinoline (I) and subsequent determination of the excess of I. 0.3 g of comminuted and dried, at 110°, sample are placed in a Ni crucible containing 5 g of fused NaOH. The crucible covered with a lid is heated first for 10 minutes over a low flame of the burner and

Card 1/3

heated for 10 minutes on a water bath at 75°, cooled, 5 ml of HCl (1:1) are added followed by a titrated solution of I (14 g I dissolved in 22 ml HCl, 1:1, and diluted with water to 1 liter) (0.6 ml per each 1% of SiO₂) after which

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Card 2/3

POLAND/Analytical Chemistry - Analysis of Inorganic
Substances.

E-2

Abs Jour : Ref Zhur - Khimiya, No 8, 1958, 24822

the mixture is heated for 10 minutes on a water bath at 65 °, cooled, acidified with 5 ml HCl (1:1), diluted with water to 500 ml and filtered through a dry filter. In the filtrate the excess of I is determined bromatometrical-ly. The duration of determination is 1.5 hour. In two samples containing 68.15 and 69.90% SiO₂ (according to classical method data) were found 68.36 and 68.53%, respectively, of SiO₂.

Card 3/3

Fuchs, Madusa, doc. dr. 122.

Twentieth anniversary of the Division of Chemistry of the Silesian
Technical University. Chemik 18 no.1:2-35 Ja '65.

1. Head, Department of Inorganic Chemistry of the Silesian
Technical University, Gliwice.

PURKIN, T.

Distr: 4E3d .

27

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1

Spectrographic determination of fluorine in carbide.
J. Czarkow and T. Pukna. *Przemysl Chem.* 11, 691-3
(1955).—Expts. on the spectrographic detn. of F in carbide
by the simplified internal standard method in the range of
conca. from 1 to 4% are described. Standards and analyt-
ical samples were prepd. in the form of tablets. The a.-c.
arc from a modified generator was used. Photomicro-
graphs were obtained by using a microphotometer coupled
with a polarograph. A. Libackvi

RH

PUKAS, T.

5th National Chemical Olympics. p.372

CHEMIK (Ministerstwo Przemyslu Chemicznego i Stowaszuszenie Naukowe-
Technikow Przemysly Chemicznego)

Warszawa, Poland

Vol. 12, No. 9, Sept. 1959

Monthly list of East European Accession (EEAI) LC, vol. 9, no. 1, Jan. 1960

Uncl.

83626

15.2120
17.1205

S/081/60/000/014/007/009
A006/A001

Translation from: Referativnyy zhurnal, Khimiya, 1960, No. 14, p. 362, # 57934

AUTHORS: Vitman, F.F., Zhurkov, S.N., Levin, B.Ya., Pukh, V.F.

TITLE: On the Problem of Raising the Strength of Glass

PERIODICAL: V sb.: Nekotoryye probl. prochnosti tverdogo teia Moscow-Lenin-grad AN SSSR, 1959, pp. 340 - 347

TEXT: The possibility is shown of doubling the strength of hardened sheet glass (EK (VV) glass specimens and "rolled" glass from the Konstantinovka "Av-rosteklo" Plant) by removing their surface defects by etching in HF solution after hardening. Average strength values of glass as high as 60-80 kg/mm² were obtained.

I. Mikhaylova

Translator's note: This is the full translation of the original Russian abstract.

Card 1/1

BUNAS, T.

A contest in chemistry. p. 148. ACTA PHYSICA POLONICA
Warszawa Vol. 9, No. 5, May, 1956.

East European Acquisitions List (EAL) Library of Congress
Vol. 5, No. 11, August 1956.

PUKAS, T.

PUKAS, T. Second National Chemical Olympiad. p .211

Vol. 9, no. 7/8, July/Aug. 1956

CHEM
SCIENCE

Warszawa, Poland

So: East European Accession, Vol. 6, no. 2, Feb. 1957

PUKAS, Tadeusz

Spectrophotometric determination of gallium by triphenyltetrazolium chloride. Chem anal 5 no.3:513 '60. (EEAI 10:8)

1. Katedra Chemii Nieorganicznej Politechniki Slaskiej, Gliwice.
(Spectrum analysis) (Gallium)
(Triphenyltetrazolium chloride)

PUKAS ; TADEUSZ

Application of the 8-quinolinol method to silica determination. ⁷ Tadeusz Pukas and Kazimiera Grabinska (Politech. Slaska, Gliwice). Zeszyty Nauk. Politech. Slask. Chem. No. 2, 83-8(1957)(English summary). ⁷ The method consists in the formation of a yellow complex, $H_2SiO_4 \cdot 12MgO$, which reacts with 8-quinolinol (I) to give an insol. ppt. Fuse 0.3 g. glass (thoroughly pulverized, dried at 110°) and 5 g. NaOH in a Ni crucible for about 30 min., and cool. Dissolve in 100 ml. H₂O, heat, add 30 ml. concd. HCl, and dil. with H₂O to 500 ml. Heat 100 ml. of this soln. and 10 ml. 20% NH₄molybdate to 75° for 10 min., cool, and add 5 ml. HCl (1:1)

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and 44 ml. I soln. prepd. by dissolving 14 g. I in 28 ml. HCl (1:1). Heat the mixt. 10 min. at 65°, cool, add 5 ml. HCl (1:1), dil. to 500 ml. with H₂O, and filter. Shake 100 ml. filtrate, 20 ml. 8% HCO₂H, 40 ml. HCl (1:1), 100 ml. H₂O, and 10 ml. 0.1N KBrO₃ + KBr soln. Add 5 ml. 10% KI and titrate with 0.1N Na₂S₂O₄. The results of SiO₂ content detns. are consistent within a few tenths of %, and differ for two glass samples by 0.2 and 0.1% from the results obtained by the classical method. J. Stecker

AM //

PUKAS, T.

Purification of crude benzene.

P. 217 (Chemik) Vol. 10, No. 7/8, July 1957, Warszawa, Poland

SO: MONTHLY INDEX OF EAST EUROPEAN ACCESSIONS (EEAI) LC. VOL. 7, NO. 1, JAN. 1958

FVKAS, T.

3

✓ 2935* Determination of Fluorine in Carbide. Spektrograficzne oznaczenie fluoru w karbidzie. (Polish.) J. Czarkow and T. Fukas. *Przemysł chemiczny*, v. 11, no. 12, Dec. 1955, p. 601-603.

An internal standard is established for measurement of CaF₂ between 1 and 4%. Graph, diagram, spectrograms, 6 ref.

W
2
AM

PUKAS, Tadeusz

Complex salts of tetrazolium ion with ions of tetrachlorogallic, indic, thallic, and chloroacids of other metals. Roczniki chemii 37 no.6:687-690 '63.

1. Department of Inorganic Chemistry, Silesian Institute of Technology, Gliwice.

PUKASENKO, Vladimir L'vovich; ZELIKOV, V., red.; KOMEROVA, V.I.,
tekhn. red.

[The brigade is keeping its word] Brigada derzhit slovo.
Frunze, Kirgizskoe gos. izd-vo, 1963. 25 p. (MIRA 17:2)

PROCESSES AND EQUIPMENT USED

(1) AND (2) GROUPS

Ca

Nature of slag inclusions in steel and methods of their determination. Yu. T. Prikashevich-Duvanova. *Repts. Inst. Metals (Leningrad) No. 15, 143-62* (In English)

(163-4)(1933); cf. C. A. 29, 3270¹.—The nonmetallic inclusions were sepd. from the metal in 7 specimens of acid and basic open-hearth C steels by the Hexly-Dickinson method, modified by the addn. to the solvent of citric acid to prevent the formation of basic salts of Fe. The sediments thus sepd. were examd. microscopically and by microanalysis. S. I. Madorsky

COMMON ELEMENTS

OPEN

WATER ALL MOES

AS N. S. L. A METALLURGICAL LITERATURE CLASSIFICATION

REGION		SUBJECT										AUTHOR									
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		

FURBERNIK, L.V., doktor tekhn. nauk, otv. red.; KACHANOVA, N.A.,
kand. tekhn. nauk, red.; MILYAKH, A.M., doktor tekhn. nauk,
red.; KHRUSHCHOVA, Ye.V., kand. tekhn. nauk, red.

[Computer technology in the design and operation of electric
power systems] Vychislitel'naia tekhnika v proektirovanii i
ekspluatatsii energosistem. Kiev, Izd-vo "Naukova dumka,"
1964. 126 p. (MIRA 17:7)

1. Akademiya nauk URSR, Kiev. Institut elektrodinamiki.

FUKH,

FUKH, (Veterinarian)

Viability of the microbes of the type Brucella bovis in cattle yards.

Source: Veterinariya: 4-5; April/May 1945 uncl
TAECCN

KOZHEVNIKOV, S.N., prof.; PUKH, A.P., inzh.

Modeling the dynamics of the strip rolling process on a
continuous mill. Izv.vys.ucheb.zav.; chern.met. 2 no.6:
133-144 Je '59. (MIRA 13:1)

1. Dnepropetrovskiy metallurgicheskiy institut i Institut chernoy
metallurgii AN USSR. Rekomendovano kafedroy avtomatizatsii
metallurgicheskogo oborudovaniya i teorii mekhanizmov Dnepropetrov-
skogo instituta.

-- (Rolling mills--Electromechanical analogies)

KOZHEVNIKOV, S.N., prof.; PUKH, A.P., inzh.

Investigating systems of automatic control of strip thickness by means of an electron modeling device. Izv.vys.ucheb. zav.; chern.met. 2 no.7:127-138 J1 '59. (MIRA 13:2)

1. Dnepropetrovskiy metallurgicheskiy institut i Institut chernoy metallurgii AN USSR. 2. Chlen-korrespondent AN USSR (for Kozhevnikov). Rekomendovano kafedroy avtomatizatsii metallurgicheskogo oborudovaniya i teorii mekhanizmov Dnepropetrovskogo metallurgicheskogo instituta.
(Rolling (Metalwork)) (Automatic control)
(Electronic analog computers)

BUKH, A. P., Cand Tech Sci (diss) -- "Modeling of systems of automatic regulation of metal thickness in rolling". Dnepropetrovsk, 1960. 14 pp (Acad Sci Ukr SSR, Inst of Ferrous Metallurgy), 100 copies (KL, No 12, 1960, 128)

KOZHEVNIKOV, S.N., prof.; PUKH, A.P., inzh.

Automatic control of strip thickness during rolling. Izv. vys.
ucheb. zav.; chern. met. 2 no.4:123-135 Ap '59. (MIRA 12:8)

1. Dnepropetrovskiy metallurgicheskiy institut i Institut chernoy
metallurgii AN USSR. Redkomendovano kafedroy avtomatizatsii
metallurgicheskogo oborudovaniya i teorii mekhanizmov Dnepro-
petrovskogo metallurgicheskogo instituta. 2. Chlen-korrespondent
AN USSR (for Kozhevnikov).
(Rolling (Metalwork)) (Automatic control)

VITMAN, F.F.; KRAUTMAN, V.R.; PUKH, V.P.

Strength of sheet glass and the size factor. Fiz. tver. tela
6 no. 4:1089-1095 Ap '64. (MIRA 17:6)

1. Fiziko-tekhnicheskii institut imeni Ioffe AN SSSR, Leningrad.

VITMAN, F.F.; PUKH, V.P.

Methods for evaluating the strength of sheet glasses. Zav.lab.
29 no.7:863-867 '63. (MIRA 16:8)

1. Leningradskiy fiziko-tekhnicheskii institut im. A.F.Ioffe.
(Plate glass--Testing)

VITMAN, F.F., doktor fiz.-matem. nauk; PUKH, V.P., kand. tekhn. nauk

Economic expediency in the production of window glass with improved strength. Stek. i ker. 20 no.10:4-8 0 '63.

(MIRA 16:10)

1. Fiziko-tekhnicheskij institut imeni A.F. Ioffe AN SSSR.
(Plate glass)

L 5229-66 EWP(e)/EWT(m)/EWP(i)/EWP(b) WH
ACC NR: AP5026038 SOURCE CODE: UR/0072/65/000/009/0012

AUTHOR: ⁴⁴ Vitman, F. F. (Doctor of physico-mathematical sciences); Pugachev, G. S. ⁴⁴ 22
Pukh, V. P. (Candidate of technical sciences) B

ORG: ⁴⁴ Physicotechnical Institute im. A. F. Ioffe, AN SSSR ⁴⁴ (Fiziko-tehnicheskiy institut AN SSSR)

TITLE: Natural high ¹⁵ strength of sheet glass ⁴⁴

SOURCE: Steklo i keramika ⁴⁴ no. 9, 1965, 12-14

TOPIC TAGS: sheet glass, glass property, hydrofluoric acid

ABSTRACT: Measurements of the strength of various parts of window glass before and after etching with hydrofluoric acid showed a great scatter of values (10-160 kg/mm² for etched glass). Measurements made after steps were taken to protect the etched surface from new flaws show that glasses reinforced by etching, i. e, freed from inherent and acquired surface defects, manifest their actual high-strength state if no accumulation of random damage is allowed to occur prior to and during the test. The observations lead to the important conclusion that the structural state of massive glass is in no way stronger than the state of glass fibers or drawn rods. Orig. art. has: 1 figure.

SUB CODE: MT / SUBM Date: 00 / ORIG REF: 011 / OTH REF: 001

Card 1/1 nd UDC: 666.11.01:620.172

09011369

L 5310-66 EWP(e)/EWT(m)/EWP(i) WH

ACC NR: AP5025714

SOURCE CODE: UR/0286/65/000/018/0070/0070

AUTHORS: Boguslavskiy, I. A.⁴⁴; Vitman, F. F.⁴⁴; Pukh, V. P.⁴⁴

24
B

ORG: none

TITLE: A method for strengthening glass and glass products. Class 32, No. 174776¹⁵

15,44

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 18, 1965, 70

TOPIC TAGS: glass, glass product

ABSTRACT: This Author Certificate presents a method for strengthening glass and glass products by quenching them from the temperatures near the temperature of softening with the help of cooling substances. To prevent strength-lowering structural and physical alterations in glass during its hardening, glass is quenched with substances of the greatest cooling capacity exactly in the anomalous range of glass hardening temperatures.

SUB CODE: MT/

SUBM DATE: 11Nov60/

ORIG REF: 000/

OTH REF: 000

OC
Card 1/1

030/0611

L 60950-65 EWP(e)/EPA(s)-2/EWT(m)/EPF(c)/EWP(i)/EWP(j)/EPA(w)-2/T/EWP(b)
Pc-l/Pq-l/Pr-l/Pt-7 WW/RM/WH

ACCESSION NR: AP5018932

UR/0363/65/001/006/0952/0956
661.1:542.65

59
57
B

AUTHOR: Vitman, F. F.; Denisenko, G. I.; Pukh, V. P.

TITLE: Effect of temperature on the elastic modulus and strength of a pyroceramic 15, 44

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 6, 1965, 952-956

TOPIC TAGS: pyroceramic, elastic modulus, lithium pyroceramic, glass elasticity

ABSTRACT: The elastic modulus of a lithium pyroceramic of composition No. 23 was measured by using a dynamic vibrational method at sonic frequencies (about 2000 cps). The data showed that the conversion to the pyroceramic state causes the elastic modulus of glass No. 23 to increase by 20%. As the temperature rises, the elastic modulus of the pyroceramic changes irreversibly, dropping 10% as the temperature changes from 20 to 750C. The strength of polished specimens increases by a factor of 3 as a result of the pyroceramization. However, this strength is only one-half that of amorphous glass, manifested by etching away the defective surface layer. This indicates a relative nature of the strengthening during formation of the pyroceramic. The strength of the latter changes with temperature in a steeper fashion than in the original glass, decreasing by a

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ACCESSION NR: AP5018932

2

factor of two as the temperature rises from 20 to 700C. This relatively abrupt and reversible change in strength with temperature is similar to that observed in metals. Orig. art. has: 4 figures and 3 tables.

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe Akademii nauk SSSR (Physico-technical Institute, Academy of Sciences, SSSR)

SUBMITTED: 11Feb65

44
ENCL: 00

SUB CODE:

NO REF SOV: 007

OTHER: 001

dm
Card 2/2

BAYKOVA, L.G.; VITMAN, F.F.; PUGACHEV, G.S.; PUKH, V.P.

High-strength state of glass. Dokl. AN SSSR 163 no.3:617-620 JI '65.
(MIRA 18:7)

1. Fiziko-tekhnicheskiy institut im. A.F.Ioffe AN SSSR. Submitted
January 18, 1965.

VITMAN, F.F.; DENISENKO, G.I.; PUKH, V.P.

Effect of temperature on the modulus of elasticity and strength
of pyroceram. Izv. AN SSSR. Neorg. mat. 1 no.6:952-956 Je '65.
(MIRA 18:8)

1. Fiziko-tekhnicheskiy institut imeni A.F. Ioffe AN SSSR.

VITMAN, F.F.; BOGUSLAVSKIY, I.A.; PUKH, V.P.

Some aspects of the strengthening of glass. Dokl. AN SSSR 145
no.1:85-88 J1 '62. (MIRA 15:7)

1. Fiziko-tekhnicheskiy institut imeni A.F.Ioffe AN SSSR i
Gosudarstvennoye spetsial'noye proyektno konstruktorskoye byuro
po steklu Vysshego Soveta narodnogo khozyaystva RSFSR. Predstavleno
akademikom B.P.Konstantinovym.
(Strength of materials) (Glass)

L 9260-66 EWP(e)/EWI(m)/EWP(b) WH

ACC NR: AP5022711

SOURCE CODE: UR/0181/65/007/009/2717/2722

AUTHOR: Vitman, F. F.; Pugachev, G. S.; Pukh, V. P.

ORG: Physicotechnical Institute im. A. F. Ioffe AN SSSR, Leningrad (Fiziko-tekhni-cheskiy institut AN SSSR)

TITLE: Safety factors and variation in the strength of plate glass

SOURCE: Fizika tverdogo tela, v. 7, no. 9, 1965, 2717-2722

TOPIC TAGS: sheet glass, high strength glass

ABSTRACT: It is shown that the values given in the literature for the strength of plate glass etched in hydrofluoric acid solutions are underestimated because insufficient attention is paid to possible accidental damage to the glass surface which may take place both before testing and while the glass is in the test installation. To verify this fact, special precautions are taken in testing the strength of glass after etching to see that damage to the surface is scrupulously avoided. A comparison with control experiments shows that the level of strength and dispersion in values observed in earlier experiments were due more to side factors than to the properties of the etched glass. The experimental data show that the guaranteed minimum values for the strength of the etched glass may be more than 100 kg·mm⁻². When precautions are taken to avoid handling of the glass in any way after etching, ordinary window

Card 1/2

L 9260-66

ACC NR: AP5022711

2
glass shows an average bending strength of $\sim 250 \text{ kg}\cdot\text{mm}^{-2}$ with a much narrower spread in experimental values than previously observed. Measurements made in a dry vacuum to eliminate the effect of ambient humidity showed a more than double increase in strength. The experimental observations show that high strength is a property inherent in amorphous solids. It is suggested that the problem of producing high-strength glass may be solved not so much by developing methods for strengthening glass as by seeking ways to protect it from being weakened, since it is already in a super-strong state in its natural form. Orig. art. has: 1 figure, 1 table.

SUB CODE: 11/

SUBM DATE: 31Mar65/

ORIG REF: 022/

OTH REF: 003

Card 2/2 *W*

15 2610

25310

S/O20/61/138/005/010/025
B-04/B205AUTHORS: Boguslavskiy, I. A., Vitman, F. F., and Pukh, V. P.

TITLE: Increase of the strength of thin glass

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 138, no. 5, 1961, 1059-1061

TEXT: Two methods have recently been proposed for improving the strength of glass: hardening and chemical etching. Hardening and subsequent etching have also been studied in detail. However, these methods are only suitable for glass having a thickness of more than 5 mm. The strength of glass 1.5-3.0 mm thick is not considerably improved by hardening in air. Etching of such glass, however, raises their average strength to 50-60 kg/cm². These values are only slightly lower than those obtained for thick glass. The authors present the results of experiments made with glass specimens having dimensions of 80-80 mm and a thickness of 1.5, 3.0, and 5.0 mm. The specimens had non-processed and mechanically polished surfaces, and were treated a) thermochemically, b) by etching with hydrofluoric acid solution, and c) by applying both methods successively. In the first method, the specimens were placed perpendicularly in a tem-

Card 1/5

Increase of the strength of ~~2500~~

S/020/61/138/005/010/025
B 04/B205

pering furnace and heated to a temperature slightly above that at which the glass softens. After 2-3 min the specimens were cooled in silicone oil and air. In the second method, a layer of 0.1 mm was removed from the surface of the specimens by etching in 20% hydrofluoric acid. The third method combines the first two procedures. The results of the tests are shown in figs. 1 and 2. The combined method (thermochemical treatment followed by etching) is shown to furnish the best results. It ensures a strength of 70-80 kg/cm². Optimum results were obtained for 1.5-mm glass whose surface had not been processed and which had a relatively high initial strength. The factors increasing the strength of glass are still unknown. It is believed that strength-reducing flaws in the surface layer are eliminated by etching or by thermochemical treatment. The rapid cooling in a liquid organo-silicon medium is likely to change the distribution of hardening strains across the thickness of the glass specimen which, in turn, gives rise to strong compressing forces in the surface layer. On the other hand, it is also necessary to take into account the effect of the hydrophobic layer which is formed on the surface of the glass specimen while being cooled in silicone oil, as well as the interaction of the strongly heated glass with the organo-silicon compounds. By

Card 2/5

Increase of the strength of ... 25310

S/Q20/61/138/005/010/025
B104/B205

using liquids that allowed the glass to be cooled more rapidly, it was possible to reach a bending strength of 100-120 kg/mm² for glass of 5 mm thickness. The bending strength could be raised up to 150 kg/mm² by reducing the thickness of the glass. There are 2 figures and 8 Soviet-bloc references.

ASSOCIATION: Fiziko-tekhnicheskii institut im. A. F. Ioffe Akademii nauk SSSR (Institute of Physics and Technology imeni A. F. Ioffe of the Academy of Sciences USSR); Gosudarstvennoye spetsial'noye proyektno-konstruktorskoye byuro po steklu (State Special Planning and Design Office for Glass)

PRESENTED: February 13, 1961, by B. P. Konstantinov, Academician

SUBMITTED: January 24, 1961

Card 3/5

Пук-Н, У.Р.

24(6)

PHASE I BOOK EXTRACTATION

30V/2385

Академија наук СССР

Материјалне проблеме прочисти твдогс тсја; ш-мик статеј (Some Problems in the Strength of Solids); Collection of Articles) Moscow, Izdatvo AN SSSR, 1959. 386 p. Errata slip inserted. 2,000 copies printed.

Ed. of Publishing House: V. I. Aver'yanov, Tech. Ed.: R. S. Fevzner; Editorial Board: A. F. Ioffe, Academician; G. V. Kurlyumov, Academician; S. M. Zhurkov, Corresponding Member, USSR Academy of Sciences; B. P. Konstantinov, Corresponding Member, USSR Academy of Sciences; V. P. Vitman, Doctor of Physical and Mathematical Sciences, Professor (Resp. Ed.); L. A. Olikin, Doctor of Technical Sciences, Professor; R. A. Zikrin, Doctor of Physical and Mathematical Sciences; V. A. Spasov, Doctor of Technical Sciences; S. B. Fridman, Doctor of Technical Sciences, Professor; B. S. Ioffe, Candidate of Technical Sciences (deputy Resp. Ed.).

PURPOSE: This book is intended for construction engineers, technologists, physicists and other persons interested in the strength of materials.

CONTENTS: This collection of articles was compiled by the Otdeleniye fiziko-matematicheskikh nauk AN SSSR (Department of Physical and Mathematical Sciences) and the Fiziko-matematicheskii Institut AN SSSR (Institute of Applied Physics, Academy of Sciences, USSR) in commemoration of the 80th birthday of Nikolay Nikolayevich Davidenko, Member of the Ukrainian Academy of Sciences, founder and head of the Institute of Applied Physics, Academy of Sciences, USSR, at the Institute of Applied Physics, Department of the Scientific Center of the All-Union Scientific Research Institute (Leningrad Polytechnical Institute) at the Leningradskiy politehnicheskii Institut (Leningrad Polytechnical Institute), recipient of the Stalin Prize (1953), the Order of the Red Banner of Labor (1945) and the Order of Lenin (1955). The articles deal with the strength of materials, phenomena of imperfect elasticity, temper brittleness, hydrogen embrittlement, cold brittleness, influence of deformation on the mechanical properties of materials, fatigue of metals, and general problems in the strength, plasticity, and mechanical properties of materials. Numerous references are mentioned in the introductory profile of Professor Davidenko.

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AVAILABLE: Library of Congress

24

L 24444-66 EWP(e)/EWT(m) WH/GS
ACC NR: AT6010578 (A) SOURCE CODE: UR/0000/65/000/000/0106/0113

AUTHOR: Pukh, V. P.

29
B+1

ORG: Physicotechnical Institute im. A. F. Ioffe AN SSSR (Fiziko-tekhicheskiy institut AN SSSR)

TITLE: Flaw density in silicate plate glass 15

SOURCE: AN UkrSSR. Mekhanizm plasticheskoy deformatsii metallov (Mechanism of the plastic deformation of metals). Kiev, Naukova dumka, 1965, 106-113

TOPIC TAGS: silicate glass, sheet glass, glass property, stress analysis

ABSTRACT: The author studies the density of flaws in ordinary silicate window glass. Specimens varying in thickness from 0.25 to 2.2 mm and ranging in size from 4x4 to 340x340 mm were subjected to symmetric bending. A curve is given showing the average strength of the glass as a function of working surface. The average strength varies from 58 to 8 kg/mm² when the working area is changed by five orders of magnitude. The distribution of individual strength values shows that the increase in strength with reduction in working area is due to a reduction in the probability of

Card 1/2

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L 24444-66

ACC NR: AT6010578

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the most dangerous defects. A curve is given showing the density of flaws responsible for fracture as a function of stress. Recommendations are made for further studies. Orig. art. has: 3 figures, 2 tables.

SUB CODE: 11/ SUBM DATE: 27Aug64/ ORIG REF: 008/ OTH REF: 000

Card 2/2 *dda*

VITMAN, F.F.; BOGUSLAVSKIY, I.A.; PUKH, V.P.

Strengthening of glass. Fiz. tver. tela 4 no.8:2160-2168
Ag '62. (MIRA 15:11)

1. Fiziki-tehnicheskii institut imeni A.F. Ioffe AN SSSR,
Leningrad.

(Glass)
(Strength of materials)

VITMAN, F.F.; DMITRIYEVA, T.G.; PUKH, V.P.

Residual stresses in glasses quenched in liquids. Fiz. tver.
tela 4 no.8:2151-2159 Ag '62. (MIRA 15:11)

1. Fiziko-tekhnicheskiy institut imeni A.F. Ioffe AN SSSR,
Leningrad.

(Glass)
(Strain and stresses)

VITMAN, F.F.; BARTENEV, G.M.; PUKH, V.P.; TSEPKOV, L.P.

Method of measuring the strength of sheet glass. Stek. i ker.
19 no.8:9-11 Ag '62. (MIRA 15:9)
(Glass--Testing)

ACCESSION NR: AP4028435

S/0181/64/006/004/1089/1095

AUTHORS: Vitman, F. F.; Krautman, V. R.; Pukh, V. P.

TITLE: The strength of sheet glass and the scale factor

SOURCE: Fizika tverdogo tela, v. 6, no. 4, 1964, 1089-1095

TOPIC TAGS: sheet glass, crushing strength, scale factor, glass hardening, tester UM 5

TOPIC TAGS: Strength was measured by a UM-5 apparatus on samples 40 x 40 x 2.2 mm, by a weight-applying device for smaller sizes, and by a pneumatic machine for larger sizes. The duration of loading (till breakage) was the same for all samples (10-30 sec). The authors have shown that the strength of sheet glass hardened by etching in solutions of fluoric acid and also the strength of untreated glass depend markedly on the dimensions of the working (uniformly loaded) surface of the sample. When this surface is increased by a factor of 100 000, the strength is decreased several times. The authors investigate the statistical nature of this effect and show that it may be less noticeable, or even entirely absent, if the glass surface has an accumulation of defects strongly affecting the general dimensions of the

Card 1/2

ACCESSION NR: AP4028435

statistical function of defect distribution on the glass surface. The breaking of glassware most frequently occurs because of very local overstresses (blows). The local character of applying load is equivalent to a sharp limitation of any equally loaded operating surface on the glass. Hardened glass, in contrast to glass with numerous surface defects, reacts to blows as if the possible appearance of the scale factor were restricted. Consequently, whatever the dimensions of a piece of sheet glass in glassware, it should manifest, when struck, greater strength than when the same stresses act on the entire surface. This is one of the advantages of hardened glass; here the scale factor has a positive value. Orig. art. has: 4 figures and 2 tables.

ASSOCIATION: Fiziko-tehnicheskii institut im. A. F. Ioffe AN SSSR, Leningrad
(Physicotechnical Institute, AN SSSR)

SUBMITTED: 22Oct63

DATE ACQ: 27Apr64

ENCL: 00

SUB CODE: MT, SS

NO REF SOV: 020

OTHER: 005

Card 2/2

S/020/62/145/001/012/018
B104/B102

AUTHORS: Vitman, F. F., Boguslavskiy, I. A., and Pukh, V. P.

TITLE: Glass hardening

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 145, no. 1, 1962, 85-88

TEXT: Glass hardness of up to 100 kg/mm^2 can be achieved by quenching the glass in liquids or air and then etching it. The authors discuss papers from the years 1933 through 1961 which deal with glass hardening methods. They conclude that in glass hardening great significance attaches not only to the hardening stresses but also to the structural state of the glass surface. There is 1 table.

ASSOCIATION: Fiziko-tekhnicheskii institut im. A. F. Ioffe Akademii nauk SSSR (Physicotechnical Institute imeni A. F. Ioffe of the Academy of Sciences USSR). Gosudarstvennoye spetsial'noye proyektno-konstruktorskoye byuro po steklu VSNKh RSFSR (State Special Planning and Designing Bureau of Glass VSNKh RSFSR)

Card 1/2

Glass hardening

S/020/62/145/001/012/018
B104/B102

PRESENTED: January 20, 1962, by B. P. Konstantinov, Academician

SUBMITTED: January 3, 1962

Card 2/2

39973

S/181/62/CO4/CO8/017/041
B125/B102

15.2190

AUTHORS: Vitman, F. F., Dmitriyeva, T. G., and Pukh, V. P.

TITLE: Residual stresses in glasses quenched in liquids

PERIODICAL: Fizika tverdogo tela, v. 4, no. 8, 1962, 2151-2159

TEXT: Complete diagrams plotted by the strip and the plate methods, are given for the residual stresses in glasses of 1.5, 3, 5, 8, and 12 mm thickness treated by the process of S. I. Sil'vestrovich and I. A. Boguslavskiy (DAN SSSR, 129, no. 6, 1362, 1959; author's certificate. 132374, 1959). Mechanical measurements of residual stresses clearly proved the advantages of glass quenching in liquids, indicating that this method of quenching ought to be further developed. Thin glasses poorly quenched in air blasts have the same quenching stresses, after a second liquid quenching, as thick glasses after a quenching of 3-4 por./cm. Considerably higher compressive stresses occur on the surface of thick liquid-quenched glasses. They are higher than when the glasses are quenched in air blasts for the same period. Since under these conditions the optical stress measurement is not reliable it should be replaced by
Card 1/2

Residual stresses in glasses ...

S/181/62/004/008/017/041
B125/B102

a mechanical measurement of the residual stress. Quenching causes higher stresses in square glass plates than in prismatic glass strips. The stresses in quenched glasses can be better determined by mechanically measuring the residual stresses in plates (biaxial state of stress) than by the customary method using specimens in the form of strip. There are 5 figures and 1 table.

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe AN SSSR,
Leningrad (Physicotechnical Institute imeni A. F. Ioffe
AS USSR, Leningrad)

SUBMITTED: March 23, 1962

Card 2/2

39974

S/181/62/004/008/018/041
B125/B102

152120

AUTHORS: Vitman, F. F., Boguslavskiy, I. A., and Pukh, V. P.

TITLE: Glass hardening

PERIODICAL: Fizika tverdogo tela, v. 4, no. 8, 1962, 2160-2168

TEXT: Glasses were tested after being hardened in the following ways: (1) by quenching in polysiloxane liquids and in mineral oils; (2) by etching in hydrofluoric solutions, and (3) by quenching with subsequent measuring 80 mm square and of 1.5, 3.0, and 5.0 mm thickness, with both natural and mechanically polished surfaces. The strength of the glass plates 1.5 to 3.0 mm thick was found to be only slightly increased by quenching in air blasts. The strength of those 5 to 6 mm thick can be increased, by quenching in organosilicon oils or in mineral oils, from 10-20 kg/mm² up to 30-80 kg/mm². By subsequent etching in hydrofluoric solutions it can be to 60 to 125 kg/mm². By this method of hardening the strength of the glass plates 1.5-3.0 mm thick could be increased to the unprecedented level of 50 kg/mm². Glass hardening by quenching in air

Card 1/2

Glass hardening

S/181/62/004/008/018/041
B125/B102

blasts and liquids is due to compressive stresses generated in the surface and largely to physical changes produced in the surface layer of the glass. The contribution of these physical changes to hardening is the greater the more rapidly the gas is cooled. This two-stage hardening process is well suited for the commercial production of large glasses and for various engineering purposes. There are 3 figures and 1 table. *f*

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe AN SSSR,
Leningrad (Physicotechnical Institute imeni A. F. Ioffe,
AS USSR, Leningrad)

SUBMITTED: March 22, 1962

Card 2/2

PUKH, V.P.

Studying the rate of crack growth in transparent bodies
by means of high-speed photography. Usp.nauch.fot. 9:228-
230 '64. (MIRA 18:11)

L 1656-66 ENT(m)/EMP(e)/EWP(1)/EWP(b) WH

UR/0020/65/163/003/0617/0620

ACCESSION NR: AP5019427

AUTHOR: Baykova, L. G.⁴⁴; Vitman, F. F.⁴⁴; Pugachev, G. S.⁴⁴; Pukh, V. P.⁴⁴

27
25
B

TITLE: The high-strength state of glass⁴⁴

SOURCE: AN SSSR. Doklady, v. 163, no. 3, 1965, 617-620

TOPIC TAGS: glass property, high strength glass, hardening

ABSTRACT: The authors examine the reasons for the spread in individual strength values for glass hardened by various thermal and chemical methods. It is assumed that the high strength observed in certain specimens from a single batch of glass is not an accident, and that this high strength would show up in the majority of the glass specimens if it were not for strong suppressing side factors. These suppressing effects are attributed chiefly to atmospheric humidity and to possible damage of the glass during installation in the testing equipment. To test this hypothesis, experiments are conducted in which the glass is protected from harmful factors from the moment hardening is started. Strength measurements show that these precautions raised the minimum strength level noticeably in the scatter zone. However, it was found that weakening influences were not completely eliminated.

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L 1656-66

ACCESSION NR: AP5019427

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Samples were then selected which were free from visible surface defects. This precaution further narrowed the scatter region and consequently increased the average strength of the batch of glass samples tested. Similar tests conducted with various types of glass hardened by various methods show analogous results. These experiments indicate that super-high-strength glass can be produced by finding practical ways to eliminate the weakening factors. It is recommended that further research should be done to determine just what these harmful factors are. Orig. art. has: 2 figures.

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe Akademii nauk SSSR
(Physicotechnical Institute, Academy of Sciences SSSR)

SUBMITTED: 27Nov64

ENCL: 00

SUB CODE: NT

NO REF SOV: 017

OTHER: 001

Cord 2/2 *EP*

ACC NR: AP6015470

(N) SOURCE CODE: UR/0181/66/008/005/1504/1510

AUTHOR: Vitman, F. F.; Masterova, M. V.; Pukh, V. P.

ORG: Physics Engineering Institute im. A. F. Ioffe, AN SSSR, Leningrad (Fiziko-tehnicheskiy institut AN SSSR)

TITLE: The influence of temperature on the strength of etched quartz glass in a high-strength state

SOURCE: Fizika tverdogo tela, v. 8, no. 5, 1966, 1504-1510

TOPIC TAGS: quartz glass, glass property, temperature effect, glass product

ABSTRACT: It has been shown elsewhere that the strength of bulk sheet glass after etching in hydrofluoric acid solutions may be unusually high if the working surface of the glass is thoroughly protected from accumulations of defects before and during the experiment. The present investigation attempts to extend this finding to commercial bulk quartz glass and to study the influence of the temperature and the heat treatment on the strength of the quartz in its high-strength state (about 300 kg/mm²). It is found that if the action of the irreversible heat processes which softens the glass and the influence of moisture in various manifestations are excluded, the strength of the quartz glass in the 50-400C temperature range is independent of

Card 1/2

I. 46827-66

ACC NR: AP6015470

C

the temperature. Orig. art. has: 7 figures.

SUB CODE: 11/ SUBM DATE: 18Oct65/ ORIG REF: 015/ OTH REF: 009

Card 2/2 blg

BOGUSLAVSKIY, I.A.; VITMAN, F.F.; PUKH, V.R.

Raising the strength of thin glass. Dokl. AN SSSR 138 no.5:1062-1065
Je '61. (MIRA 14:6)

1. Fiziko-tekhnicheskiy institut im. A.F.Ioffe AN SSSR i
Gosudarstvennoye spetsial'noye proyektno-konstruktorskoye byuro po
steklu. Predstavleno akademikom B.P.Konstantinovym.
(Glass manufacture) (Strength of materials)

Pukha, I. K.

Technological scheme of production of magnesium oxide
from desulfurated Sivash natural brine and dolomite
I. K. Pukha. *Trudy Vsesoyuz. Nauch.-Issledovatel. Inst.
Gos. 1956, No. 31, 28-33.* -- In the above scheme, dead-
burned dolomite is slaked with a small quantity of brine and
then screened and wet-ground in a ball mill in closed circuit
with a spiral classifier. The classifier overflow enters a
series of reaction vessels.

27
15
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4E2C

808 MT/1

Кушна, И. К.

Dehydration of schoenite in rotating type of drying drum.
I. K. Kukhina. *Trudy Vsesoyuz. Nauch.-Issledovatel. Inst.
Galgurii* 1956, No. 31, 155-63. Crude schoenite, contg.
30-2% H₂O, was dehydrated to 0.5% H₂O in a lab. rotary

... the characteristics of drier operation
were discussed E. M. Etkin //

Рух, Р.Р

PHASE I BOOK EXPLOITATION

372

Ruvinskiy, Semen Mikhaylovich, and Starets, Iosif Samoylovich
Modernizatsiya uzlov treniya prokatnykh stanov (Improving
Friction Elements of Rolling Mills) Moscow, Metallurgizdat,
1957. 189 p. 2,500 copies printed.

Ed.: Korolov, A.A., Candidate of Technical Sciences; Ed. of
Publishing House: Bagin, A.A., Engineer; Tech. Ed.:
Attopovich, M.K.

PURPOSE: This book is intended for engineers and technicians in
the maintenance and operations section of metallurgical plants.
It may also be of use in developing new equipment or modernizing
existing equipment in rolling mills.

COVERAGE: The sixth Five-year Plan provides for a 40 percent increase
in the production of rolled stock through better utilization of
existing equipment. An important factor in this respect is the
reducing of downtime due to unscheduled repairs of high-
mortality friction elements in rolling mills. Methods of
replacing sliding bearings in tube rolling mills with anti-
friction bearings without major structural changes

Improving Friction Elements of Rolling Mills

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are described and evaluated in detail. The emphasis is on quick-replacement techniques without affecting output. These methods were developed and tested at the Leningrad Engineering Bureau of Soyuzpodshipniksbyt. The author acknowledges the assistance and contributions of the following: Yakimovich, A.F. (deceased), and Garmash, E.E., both of the Izhorski plant; Pukh, P.P.; Berdyanskiy, M.G.; and Shibayev, L.F. of the plant imeni Lenin; Sominskiy, Z.A.; Ganets, F.M.; and Falin, V.A. of the Sinarskaya pipe plant; Verigo, V.P. and Shubik, M.A., of the Chelyabinsk pipe plant; Gredasov, P.V., and Gremyachkin, N.L., of the Novotrubnyy plant; Likhoradov, P.I. of the Petrovski plant.

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Card 5/5

PODGAYETSKIY, G.B., kand.med.nauk; PUKH, Ye.I., kand.biolog.nauk

Sulfamethine treatment of otitis media purulenta chronica in tuberculosis patients. Pat., klin.i terap.tub. no.8:210-212 '58. (MIRA 13:7)

1. Iz Ukrainskogo nauchno-issledovatel'skogo instituta tuberkuleza im. akad. F.G. Yanovskogo.
(SULFONE) (TUBERCULOSIS) (EAR--DISEASES)

PODGAYETS'KIY, G.B., kand.med.nauk; PUKH, Ye.I., kand.biol.nauk

Diagnosis and treatment of chronic purulent otitis media in tuberculosis. Vest.otorin. 20 no.2:64-68 Mr-Ap '58.
(MIRA 12:11)

1. Iz Ukrain'skogo nauchno-issledovatel'skogo instituta tuberkuleza, Kiyev.

(TUBERCULOSIS, compl.

chronic purulent otitis media, diag. & ther.
(Rus))

(OTITIS MEDIA, compl.

tuberc. in chronic purulent otitis media.
(Rus))

(Ukr. M.V.) Kaniuk I.I.

Electrophoresis of album extract in heparin gels in the vitreous body of traumatic origin. Opt. zhur. 18 No. 3-113-152 1971.

(MIR 1974)

7. Iz glaznoy kliniki Kiyevskogo instituta nevrologicheskoy i psichiatricheskoy meditsiny.

YUGOSLAVIA / Microbiology. Microbes Pathogenic to Man F-5
and Animals. Bacteria. Bacteria of the
Intestinal Group.

Abs Jour: Ref Zhur-Biol., No 16, 1958, 72150.

Author : Katich, R.; Pukhach, I.; Jankovich, B.; Simonovich, B.; Khrgovich, N.; Bandur, B.

Inst : Not given.

Title : Influence of Photoclimatic Factors on the Formation of Immune Globulins in Rabbits Immunized with S. typhimurium.

Orig Pub : Acta veterin., 1957, 7, No 2, 65-68.

Abstract: Two groups of rabbits were immunized with increasing doses of S. typhimurium; the first group was kept in darkness, the second in daylight. By means of electrophoretic analysis, great individual fluctuation was found in the content of dif-

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L 6536-66 EWT(1)/FS(7)-3 DD

ACC NR: AP5027168

SOURCE CODE: PO/0056/65/016/005/0727/0737

AUTHOR: Jozkiewicz, S. — Yuzkevich, S. (Professor, Doctor, Director); Puchalik, M. — Pukhalik, M. (Professor, Doctor, Director); Cygan, Z. — Tsygan, Z.; Drozdz, M. — Drozhdzh, M.; Gregorczyk, J. — Gregorchik, Ya.; Grzcsik, J. — Gzhesik, Ya.; Krzoska, K. — Kshoska, K.; Lewandowska-Tokarz, A. — Levandovska-Tokazh, A.; Stanosek, J. — Stanosek, Ya.; Zak, T. — Zhak, T.

ORG: Institute of Physiological Chemistry, Silesia AM, Zabrze-Rokitnica (Zaklad Chemii Fizjologicanej Sl. AM); Institute of Medical Physics, Silesia AM, Zabrze-Rokitnica (Zaklad Fizyki Lekarskiej Sl. AM)

TITLE: Investigation of the effect of sonic and ultrasonic fields on biochemical processes. IX. Effect on some blood components in men working under noisy conditions

SOURCE: Acta physiologica polonica, v. 16, no. 5, 1965, 727-737

TOPIC TAGS: human physiology, working condition, man, medical experiment, biologic vibration effect, sound, ultrasonic field, acoustic biologic effect

ABSTRACT: The levels of blood glucose, pyruvic acid, ascorbic acid, proteins, protein fractions, nonprotein nitrogen, phospholipid phosphorus, and the activities of aminotransferase and aldolase were determined in 80 persons to study the effect of noisy working conditions on the workingman. The test subjects were employed in a large industrial establishment

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ACC NR: AP5027168

and exposed to vibration and noise. All were in relatively good health. The control group consisted of workers in the same factory, but not exposed to a noisy environment. The results showed the following: a decrease in blood sugar, phospholipid phosphorus, and ascorbic acid; an increase in protein, albumin, and nonprotein nitrogen. The gamma globulin, however, showed a decrease. There was a slight increase in aspartic aminotransferase and alamine aminotransferase, and a slight decrease in aldolases. The results of determinations of other components studied, different from those in guinea pigs, are discussed. Orig. art. has: 9 tables.

SUB CODE: PH, LS / SUBM DATE: 09Nov64 / ORIG REF: 000 / OTH REF: 021

nw

Card 2/2

PURKHAJIN, A.LI.

Automatic station for testing motor-vehicle engines. Avt. prom. 30
no. 10:32-34 0 '64. (MIRA 17311)

1. Moskovskiy avtozaved im. Likhacheva.

28(1)

SOV/118-59-1-7/16

AUTHOR: Pukhalin, A.I., Engineer

TITLE: Mechanisation of Transport and Warehouse Operations in the Auto Plant imeni I.A. Likhacheva (Mekhanizatsiya transportnykh i skladskikh rabot na avtozavode imena I. A. Likhachev).

PERIODICAL: Mekhanizatsiya i Avtomatizatsiya Proizvodstva, 1959, Nr. 1, pp 28-32 (USSR)

ABSTRACT: About 1,800,000 tons of freight arrive in the plant every year. The annual amount of freight handled within the plant reaches several tens of millions of tons. Transportation of freight within the plant is performed primarily by motorized trolleys (Figure 1). Other types of transportation include conveyers and electric trucks. In all, plant has 82 truck-tractors, 160 hoist electric trucks, 165 various automobiles, 25 timber carrier trucks and auxiliary trolleys. The conveyer system is

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SOV/118-59-1-7/16

Mechanisation of Transport and Warehouse Operations in the Auto Plant imeni I.A. Likhacheva

14,000 m long. This includes two 650 m long inter-shop conveyers. Transportation of materials and components is facilitated by specially designed containers and multi-story mobile racks. The plant contemplates extension of the conveyer system. Considerable importance is attached to introduction of the so-called "push-type" conveyers, which are planned to reach 3,840 m in length. This type of conveyer is capable of transferring assembly details from one onto another conveyer without having to rehang them. The article describes how such a conveyer functions. Together with other types of conveyers and transporters, the "push-type" conveyers will link the key production and assembly units of the plant. The author states, that when plans for mechanization are completed, the plant will be able to free about 1,500 workers for other jobs.

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Mechanisation of Transport and Warehouse Operations in the Auto
Plant imeni I.A. Likhacheva

The plant has developed and is introducing a conveyer system for the removal of shavings to the shavings-processing point. A hoist and special stacker (Figure 8) handle the about 20 tons of ball bearings, that the plant receives in containers annually from the 1st GPZ. They facilitate multi-level storage. There are 2 photographs and 6 diagrams.

Card 3/3

PUKHALIN, A.I.

Automatization of conveying operations in automobile body painting.
Avt.prom. no.9:40-42 S '61. (MIRA 14:9)

1. Moskovskiy avtozavod imeni Likhacheva.
(Assembly-line methods) (Automobiles--Painting)

FUKHALIN, A.I., inzh.

Mechanization of conveying and storing operations at the
Moscow Likhachev Automobile Plant. Mekh.i avtom.proizv. 15
no.11:39-41 N '61. (MIRA 14:11)

(Moscow--Automobile industry)

(Moscow--Conveying machinery)

(Moscow--Warehouses)

PUKHALIN, A.I., inzh.

Mechanizing the interplant transportation at the Likhachev
Automobile Plant. Mashinostroitel' no.12:7-8 D '59.
(MIRA 13:3)

(Moscow--Conveying machinery--Technological innovations)

PUKHALIN, A.I., inzhener; PLAKHOV, A.M., inzhener.

Mechanization at the dispatch storehouses of automobile factories.
Mekh.trud.rab. ll no.5:42-43 My '57. (MLRA 10:7)
(Automobile industry) (Cranes, derricks, etc.)

PHYSICAL CHEMISTRY

POLAND / Physical Chemistry. Surface Phenomena. Adsorption. Chromatography. Ion Exchange. B

Abs Jour: Ref Zhur-Khimiya, No 16, 1958, 53139.

Author : Dolinsky, ~~Pukhalka.~~

Inst : Univ. Jagiell.

Title : Gypsum as an Adsorbent in Potentiometric Chromatography. I.

Orig Pub: Zesz. nauk. Univ. Jagiell., 1957, No 14, 147-155.

Abstract: A gypsum prepared according to the method of Brockman (Brockman H., Disc. Faraday Soc., 1949, No 7) might be used for a separation of pyridine bases and fatty acids. To a 30% CaCl_2 solution an equimolar amount of concentrated H_2SO_4 is added (in the cold), the mixture is diluted with a two fold amount of water, and put aside for 24 hours, after which time it is filtered and the precipitate washed with

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POLAND / Physical Chemistry. Surface Phenomena. B
Adsorption. Chromatography. Ion Exchange.

Abs Jour: Ref Zhur-Khimiya, No 16, 1958, 53139.

Abstract: benzine, whereas the elution of bases is accompanied by a change in potential of a few hundred mv (up to 600mv). When a 10% CaCl_2 solution is precipitated with 15% H_2SO_4 at 90°C and the precipitate dried at 200°C for 40 hours CaSO_4 is obtained similar to a neutral Kahlbaum's preparation. It produces a change in potential for stearic acid of $\sim 60\text{mv}$ and for the pyridine bases of 15-13 mv in a chromatographic separation.

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